
INVITED INDUSTRIAL SEMINARS, LECTURES & PRESENTATIONS

- [64] A. M. Farid, "Accelerating the Shared Integrated Grid in the Midst of the COVID-19 Energy Landscape," in *ISO New England Consumer Liaison Group Invited Presentation*, Virtual Event, June 11, 2020.
- [63] A. M. Farid, "Engineering System Integration of Renewable Energy and Water Resources in New England," in *Great River Hydro Invited Lecture*, Wilder, VT, December 4, 2019.
- [62] A. M. Farid, "The Future of Electricity Markets: End-to-End Market Innovation," in *International Energy Agency and Australian Energy Market Operator Future Electricity Market Summit*, Sydney, Australia, November 18 2019.
- [61] A. Muzhikyan, S. O. Muhanji, G. Moynihan, D. Thompson, Z. Berzolla, and A. M. Farid, "New England's Evolving Electricity Landscape: Highlights from the ISO-NE System Operational Analysis and Renewable Energy integration Study (SOARES)," in *2019 Fall Technical Workshop Energy Systems Integration Group*, Hanover, NH, USA, October 29 2019.
- [60] A. M. Farid and M. McGranaghan, "Towards an energy internet of things extensible information model," in *Customer-Centric Vision and Development of the Shared Integrated Grid Data Platform Workshop*, Philadelphia, PA, USA, 2019.
- [59] A. M. Farid, "Structural resilience of the electric power grid: Model and measures," in *IEEE Smart Grid Webinar Series*, Hanover, NH, USA, 2019.
- [58] A. M. Farid, "Developing an eiot platform for customer participation in the shared integrated grid," in *ACI Smart Home Energy Management Systems Conference*, Paris, France, USA, 2019.
- [57] A. M. Farid, "Disruptive electricity market innovation: Motivation and pathways," in *What is Next for Our Electricity Markets? Towards a New Market Regulatory Framework IX Electricity Security Advisory Panel Workshop*, Paris, France, USA, 2019.
- [56] A. M. Farid, "Transforming a smart city's architecture: Hetero-functional graph theory, enterprise control, and the energy internet of things," in *Sidewalk Labs*, Hanover, NH, USA, 2019.
- [55] A. M. Farid, "Intelligent transportation-energy systems for massively electrified transportation infrastructure," in *Resource Systems Group Inc*, White River Junction, VT, 2018.
- [54] A. M. Farid, "Performance assesment of massively electrified transportation infrastructure: An abu dhabi example," in *International Energy Agency Fifth Annual Expert Workshop: Challenges in Electricity Decarbonisation*, Paris, France, 2018.
- [53] A. M. Farid, "eiot: The development of energy internet of things applications in energy infrastructure," in *International Energy Agency Invited Lecture*, Paris, France, 2018.
- [52] A. M. Farid, "Applications of a reference architecture for the energy water nexus," in *INCOSE Invited Seminar*, Boston, MA, USA, 2018.
- [51] A. M. Farid, "A systemic perspective on the many faces of grid resilience," in *Ensuring Grid Resilience in a Rapidly Changing World – the 8th IEA Electricity Security Advisory Panel Workshop*, Tokyo, Japan, 2018.
- [50] A. M. Farid, "The role of electrified transportation in the massachusetts' transportation future," in *2018 Massachusetts Governor's Transportation Commission*, Worcester, MA, USA, 2018.

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- [49] A. M. Farid, B. Liner, and A.-M. Corriveau, "Where do intelligent water systems fit in the smart city movement? insights from the ieee smart cities technical community," in *2018 ISA Water/Wastewater and Automatic Controls Symposium*, Washington, D.C. USA, 2018.
- [48] A. M. Farid, "Considerations for the valuation of distributed energy resources," in *New Hampshire Public Utilities Commission*, Concord, NH, 2018.
- [47] A. M. Farid, "2017 iso new england system operational analysis and renewable energy integration study (soares): Scenario results," in *ISO New England Planning Advisory Committee*, Westborough, MA, 2017.
- [46] A. M. Farid, "2017 iso new england system operational analysis and renewable energy integration study (soares): Study methodology," in *ISO New England Planning Advisory Committee*, Westborough, MA, 2017.
- [45] A. M. Farid, "The case for holistic enterprise control assessment of transactive energy: Lessons learned in renewable energy, demand response integration, and electrified transportation," in *International Energy Agency Invited Lecture*, Paris, France, 2017.
- [44] A. M. Farid, "The case for holistic enterprise control assessment of transactive energy: Lessons learned in renewable energy and demand response integration," in *Transactive Systems Program Review Meeting*, Washington, D.C. USA, 2017.
- [43] A. M. Farid, "Introduction to enterprise control assessment methods for renewable energy integration in ne-iso: Lessons learned in renewable energy," in *SOARES Kickoff Meeting*, Holyoke, MA, 2017.
- [42] A. M. Farid, "The case for holistic enterprise control assessment of transactive energy: Lessons learned in renewable energy and demand response integration," in *A NIST Webinar*, Hanover, NH, USA, 2016.
- [41] A. M. Farid, "The case for transactive energy demand response relative to current practice: A comparative techno-economic assessment," in *3rd Annual Demand Response and Distributed Energy Resources World Forum*, Chicago, Illinois, 2016.
- [40] A. M. Farid, "Opportunities for integrated energy-water planning and operation," in *Expert Workshop on Understanding the Water-Energy Nexus: Integrated Water and Power System Modeling*, EC Joint Research Centre Ispra Italy, 2016.
- [39] A. M. Farid, "Intelligent transportation-energy systems for massively electrified transportation infrastructure," in *ITE 2016 Northeastern District Annual Meeting*, Portsmouth, NH, 2016.
- [38] A. M. Farid, "Enterprise control as a holistic assessment method for variable generation and demand response integration," in *UVIG Spring Technical Workshop*, Sacramento, CA, 2016.
- [37] A. M. Farid, "Intelligent transportation-energy systems for massively electrified transportation infrastructure," in *Union for Concerned Scientists Invited Presentation*, Hanover, NH, USA, 2016.
- [36] A. M. Farid, "Microgrids as a key enabling transactive energy technology for resilient self-healing power grid operation," in *Transactive Energy Systems Conference*, Portland, Oregon, 2016.
- [35] A. M. Farid, "The liines research program: A few takeaways," in *National Grid Invited Presentation*, Waltham, MA, 2016, pp. 1-27.

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- [34] A. M. Farid, "Connected electric vehicles – implications on intelligent transportation systems," in *Toyota Invited Seminar*, Hanover, NH, USA, 2016, pp. 1–59.
- [33] A. M. Farid, "The LIINES: Renewable energy integration, transportation electrification, and the energy-water nexus," in *EPRI Invited Seminar*, Hanover, NH, USA, 2016, pp. 1–140.
- [32] A. M. Farid, "Enterprise control assessment methods for future renewable energy integration," in *Bonneville Power Administration Invited Lecture*, Portland, Oregon, 2016, pp. 1–67.
- [31] A. M. Farid, "Enterprise control assessment methods for future renewable energy integration," in *Pacific Northwest National Laboratory Invited Lecture*, Richland, WA, USA, 2016, pp. 1–67.
- [30] A. M. Farid, "LIINES Capabilities and Insights for the NIST Transactive Energy Challenge," in *NIST Transactive Energy Challenge Invited Presentation*, Gaithersburg, MD, 2015, pp. 1–16.
- [29] A. M. Farid, "Cybersecurity of the Power Grid's Enterprise Control," in *A BBN Invited Presentation*, Cambridge, MA, USA, 2015, pp. 1–57.
- [28] A. M. Farid, "Enterprise Control Assessment Methods for Renewable Energy Integration in NE-ISO," in *A New England ISO Invited Presentation*, Holyoke, MA, 2015, pp. 1–63.
- [27] A. M. Farid, "Connected Electric Vehicles – Implications on Intelligent Transportation System Design," in *1st International ITS Innovation Forum – Connected & Autonomous Vehicles Technology*, Abu Dhabi, UAE, 2015, pp. 1–34.
- [26] A. M. Farid, "LIINES Research Program Overview: Policy & Regulatory Lens," in *Energy Research Centre of the Netherlands*, Amsterdam, Netherlands, 2015, pp. 1–31.
- [25] A. M. Farid, "Industrie4.0.4airbus," in *Airbus Invited Presentation*, Abu Dhabi, UAE, 2015, pp. 1–12.
- [24] A. M. Farid, "Demand side management capabilities in iSmart – Masdar Institute," in *Dubai Energy and Water Authority Invited Presentation*, Abu Dhabi, UAE, 2015, pp. 1–12.
- [23] A. M. Farid, "Enterprise control assessment methods for future renewable energy integration," in *PJM-ISO Invited Lecture*, Audobon, PA, 2015, pp. 1–32.
- [22] A. M. Farid, "Industrial systems energy management: Opportunities & challenges for a growing region," in *Saint Gobain Days Symposium on Energy Invited Presentation*, Abu Dhabi, UAE, 2015, pp. 1–32.
- [21] A. M. Farid, "Intelligent transportation-energy systems for massively electrified transportation infrastructure," in *ITS Forum – UAE International Summit Invited Presentation*, Abu Dhabi, UAE, 2015, pp. 1–32.
- [20] A. M. Farid, "Enterprise control assessment methods for future renewable energy integration," in *National Renewable Energy Laboratory Invited Lecture*, Golden, CO, USA, 2015, pp. 1–32.
- [19] A. M. Farid, "Intelligent transportation-energy systems for massively electrified transportation infrastructure," in *Volpe National Transportation System Ctr. U.S. Department of Transportation Lunchtime Seminar Series*, Cambridge, MA, USA, 2015, pp. 1–32.
- [18] S. El Khatib and A. M. Farid, "Smart Grids: The Path Going Forward," in *3rd Annual Smart Grid and Smart Meter Summit: Gateway to a Smart Future*, Abu Dhabi, UAE, 2013, pp. 1–37.

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- [17] A. M. Farid, "Intelligent transportation-energy systems: Abu Dhabi feasibility study," in *Gulf Traffic Conference*, Dubai, UAE, 2014, pp. 1–32.
- [16] A. M. Farid, "Opportunities for integrated energy-water management in the Gulf Cooperation Council," in *3rd Annual Global IWPP Summit*, Dubai, UAE, 2014, pp. 1–32.
- [15] A. M. Farid and K. Youcef-Toumi, "Enernoc's future role in the integrated assessment of energy and ancillary service markets," in *Enernoc Invited Lecture*, 2014, pp. 1–54.
- [14] A. M. Farid, R. Al Junaibi, and A. Viswanath, "The Need for Intelligent Transportation-Energy Systems: An Abu Dhabi Case," in *International Sustainable Transportation Conference*, Abu Dhabi, UAE, 2014, pp. 1–28.
- [13] A. M. Farid, K. Youcef-Toumi, A. Annaswamy, A. Chandrakasan, M. Dahleh, M. Roozbehani, J. Williams, M. Salman, M. El-Sayed, and M. Heilelhel, "Robust & Secure Sensing, Communication & Control Architecture for Future Energy Grids," in *MIT Kuwait Center for Natural Resources & the Environment Preproposal Review Workshop*, Kuwait City, Kuwait, 2014, pp. 1–59.
- [12] R. Al Junaibi, A. Viswanath, and A. M. Farid, "Technical Feasibility Assessment of Electric Vehicles in Abu Dhabi," in *MHI-ADDOT-MI Joint Workshop*, Abu Dhabi, 2013, pp. 1–62.
- [11] A. M. Farid, "The Role of Intelligent Transportation Energy Systems for Electric Vehicles: An Abu Dhabi Case Study," in *Gulf Traffic*, no. December, Dubai, UAE, 2013, pp. 1–30.
- [10] A. M. Farid, "Future of the Electricity Grid: The Need for New Methods of Integrated Assessment," in *GCC CIGRE: System Performance Development and Renewable Energy*, no. January, Abu Dhabi, UAE, 2013, pp. 1–45.
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- [6] A. M. Farid, "2012 LIINES Research Overview," in *LIINES-The Laboratory for Intelligent Integrated Networks for Engineering Systems Research Overview – A Presentation to HE Ahmad Al-Sayegh*. Abu Dhabi, UAE: Dolphin Energy, 2012, pp. 1–18.
- [5] A. M. Farid, I. S. Khayal, and T. Mezher, "The Engineering Systems and Management Program at Masdar Institute: A Presentation to the UAE Prime Minister's Office," United Arab Emirates Prime Minister's Office, Dubai, UAE, Tech. Rep., 2012.
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- [1] A. M. Farid, "An Evaluation of the DACS Methodology," in *University of Cambridge – Rockwell Automation Joint Workshop on Holonic Manufacturing Systems*, Trebon, Czech Republic, 2004, pp. 1–35.

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- [60] A. M. Farid, "Engineering System Integration of Renewable Energy, Water, and Electric Vehicles: Perspectives from New England and Abu Dhabi," in *Invited Jones Seminar*, Hanover, NH, USA, January 8, 2021.
- [59] A. M. Farid, "Applications of a Reference System Architecture for the Energy Water Nexus," in *Raytheon Technologies Systems Engineering and Architecture Symposium. University of Virginia Engineering Systems and the Environment Department Invited Presentation*, Charlottesville, VA, September 15, 2020.
- [58] A. M. Farid, "Tutorial on Hetero-functional Graph Theory for Guiding Participants Systematically through MBSE and Graph Theory Using Smart City Example," in *INCOSE 2020 Fall Workshop*, Virtual Workshop, October 16, 2020.
- [57] W. C. Schoonenberg, S. O. Muhanji, and A. M. Farid, "Interdependent Energy Infrastructure Systems," in *Irving Institute for Energy and Society Research Seminar*, Hanover, NH, USA, October 7, 2020.
- [56] A. M. Farid, "Towards a National Water Data Platform: Reference Architecture and Digital Twin Information Model," in *NSF Mid-Scale Research Infrastructure Workshop. Workshop for Intelligent Water Systems. Andlinger Center for Energy and the Environment. Princeton University*, Princeton, NJ, August 25, 2020.
- [55] A. M. Farid, "Accelerating the Shared Integrated Grid through an eIoT eXtensible Information Model," in *Stanford University Digital Grid Series Invited Presentation*, Stanford, CA, USA, July 15 2020.
- [54] A. Salas and A. M. Farid, "Research with Impact — Dartmouth's Role in Advancing New Hampshire's Clean Energy Future," in *Dartmouth Energy Collaborative Energy Seminar*, Hanover, NH, USA, May 19 2020.
- [53] W. C. Schoonenberg, I. S. Khayal, and A. M. Farid, "Modeling Interdependent Smart City Infrastructures with Hetero-functional Graphs," in *Topics in Applied Network Science Invited Seminar*, Hanover, NH, USA, February 20 2020.
- [52] A. M. Farid, "Engineering System Integration of Renewable Energy, Water, and Electric Vehicles: Perspectives from New England and Abu Dhabi," in *University of Wisconsin Mechanical Engineering Invited Lecture*, Madison, WI, USA, February 17 2020.
- [51] S. O. Muhanji and A. M. Farid, "Lebanon Blockchain Transactive Energy Control (LEBTEC)," in *Irving Institute Energy Society Research Symposium*, Hanover, NH, USA, November 5 2019.

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- [50] W. C. Schoonenberg, I. S. Khayal, and A. M. Farid, "Modeling Interdependent Smart City Infrastructures with Hetero-functional Graphs," in *Dartmouth Interdisciplinary Network Research Invited Seminar*, Hanover, NH, USA, October 25 2019.
- [49] P. Hegde, S. O. Muhanji, W. C. Schoonenberg, D. Thompson, and A. M. Farid, "The Arctic Resilient Intelligent Integrated Energy System," in *CRREL-ARIIES Kickoff Meeting*, Hanover, NH, USA, October 9 2019.
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- [47] A. M. Farid, "Engineering systems integration of renewable energy, water, and electric vehicles: Perspectives from new england and abu dhabi," in *Invited Lecture – University of California Berkeley Department of Civil and Environmental Engineering*, Berkeley, CA, USA, April 20 2019.
- [46] A. M. Farid, "Engineering systems integration of renewable energy, water, and electric vehicles: Perspectives from new england and abu dhabi," in *Invited Lecture – Stanford University Precourt Institute for Energy*, Stanford, CA, USA, April 19 2019.
- [45] W. C. Schoonenberg, I. S. Khayal, and A. M. Farid, "Modeling interdependent smart city infrastructures with hetero-functional graphs," in *Invited Lecture – Northeastern University Mechanical and Industrial Engineering*, Boston, MA, USA, February 8 2019.
- [44] W. C. Schoonenberg, I. S. Khayal, and A. M. Farid, "Trends in urban infrastructures," in *NEFI Energy Leaders Program at Tuck*, Hanover, NH, USA, April 3 2019.
- [43] W. C. Schoonenberg, I. S. Khayal, and A. M. Farid, "Hetero-functional graph theory for interdependent smart city infrastructures," in *Invited Lecture – Institute for Security, Technology, and Society*, Hanover, NH, USA, February 6 2019.
- [42] W. C. Schoonenberg and A. M. Farid, "Smart cities 101," in *Invited Lecture – Revers Center for Energy*, Hanover, NH, USA, January 31 2019.
- [41] A. M. Farid, S. O. Muhanji, and C. Barrows, "The new england energy-water nexus: Simulation results and insights," in *US-EU Integrated Power and Water Systems Modelling Workshop*, December 6 2018.
- [40] W. C. Schoonenberg and A. M. Farid, "Hetero-functional graph theory for interdependent smart city infrastructures," in *Dartmouth Department of Mathematics Invited Seminar*, Hanover, NH, USA, 2018.
- [39] A. M. Farid, "Distributed control for distributed energy resources: Long-term challenges and lessons learned," in *IEEE Power and Energy Society General Meeting*, Portland, Oregon, 2018.
- [38] A. M. Farid, "Resilience in critical infrastructures: Deploying a hetero-functional graph theory," in *CESUN Global Conference*, Tokyo, Japan, 2018.
- [37] C. Barrows and A. M. Farid, "How much flexibility can the water infrastructure provide to the electric power system in new england? – preliminary results," in *US-EU Integrated Power and Water Systems Modelling Workshop*, June 25 2018.

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- [34] C. Below and A. M. Farid, "Lebanon community power's transactive energy municipal aggregation pilot," in *2018 Transactive Energy Systems Conference and Workshop*, Cambridge, MA, USA, 2018.
- [33] A. M. Farid, "The many faces of resilient energy systems: Technical, economic, regulatory, social, ecological," in *2018 Irving Institute for Energy & Society Workshop on Resilient Energy Systems*, Hanover, NH, USA, 2018.
- [32] A. M. Farid, "Intelligent transportation- energy systems for future large scale deployment of electrified transportation," in *2017 IEEE International Summer School on Smart Cities (IEEE S3C)*, Natal, Brazil, 2017.
- [31] A. M. Farid, "State of the art & best practice in renewable energy integration and demand response," in *2017 IEEE International Summer School on Smart Cities (IEEE S3C)*, Natal, Brazil, 2017.
- [30] A. M. Farid, "Opportunities for integrated energy-water planning and operation," in *2017 IEEE International Summer School on Smart Cities (IEEE S3C)*, Natal, Brazil, 2017.
- [29] A. M. Farid, "Opportunities for integrated energy-water planning and operation," in *IEEE Power and Energy Society General Meeting*, Chicago, IL, USA, 2017.
- [28] A. M. Farid, "The ieee smart cites initiative: Brief overview," in *American Control Conference*, Seattle, WA, USA, 2017.
- [27] A. M. Farid, "Opportunities for integrated energy-water planning and operation," in *Special Session: Optimization in Food-Energy-Water Nexus. INFORMS Annual Meeting*, Chicago, IL, USA, 2017.
- [26] A. M. Farid, "Energy is physical, energy is economic, energy is political: The case for engineering systems," in *2017 Irving Institute for Energy and Society Inaugural Speaker Forum*, Hanover, NH, USA, 2017.
- [25] A. M. Farid, "Enterprise control as a holistic assessment method for renewable energy and demand response integration," in *Worcester Polytechnic Institute Invited Lecture*, Worcester, MA, USA, 2017.
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- [18] A. M. Farid, "Holistic enterprise control assessment for future renewable energy integration," in *Greeks at Dartmouth College Invited Lecture*, Hanover, NH, USA, 2016.
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